Remarks

Claims 1-12 and 23-33 are currently being examined. Claims 2, 3, 5, 6 and 24-27 have been cancelled without prejudice. Claims 1, 4, 8, 9, 23, 30, 32 and 33 have been amended. Support for the claim amendments can be found throughout the specification. No new matter has been added. The Examiner's remarks in the Office Action are addressed below.

Cancellation and/or amendment of claims should in no way be construed as an acquiescence to any of the Examiner's rejections. The cancellation and/or amendments to the claims are being made solely to expedite prosecution of the present application. Applicants reserve the option to further prosecute the same or similar claims in the instant or in a subsequent patent application.

Claim Rejections

The Examiner rejected claims 1-8, 23-29 and 32-33 under 35 U.S.C. 102(b) as being anticipated by Guley et al (U.S. Patent No. 4,309,405). The Examiner asserts that Guley teaches a tablet core comprising drug and a 3-72% mixture of water soluble and water-insoluble polymers where hydroxypropyl cellulose and carboxyl vinyl polymer are specified. A cellulose acetate phthalate coating is also disclosed. The Applicant's respectfully disagree with the Examiner and offer the following rebuttal of the rejection. In order to further the prosecution of the application, the independent claims have been amended to recite that the covalently crosslinked water insoluble, water-swellable polymers comprise polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol and that the uncrosslinked, linear water soluble polymers comprise a mixture of hydroxyethyl cellulose and hydroxypropyl methylcellulose.

Guley teaches a composition which comprises a core of drug with at least one water soluble polymer selected from HPMC, HPC and natural gums and a water insoluble polymer mixture of at least one of EC and carboxypolymethyene, HPMC phthalate and HPC. The core may contain pharmaceutically acceptable excipients such as binders, fillers, compression aids, lubricants, granulation aids, flow aids and the like.

In contrast, the present invention is directed to a pharmaceutical device or composition that comprises up to about 50% by weight covalently crosslinked water insoluble, water-swellable polymers comprising polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol and about 1 to 75% by weight uncrosslinked, linear water soluble polymers comprising a

mixture of hydroxyethyl cellulose and hydroxypropyl methylcellulose. The Applicants have found that the combination of these recited elements provide for a controlled, sustained release of the pharmaceutical incorporated therein when administered and ingested within the GI tract. Guley does not teach or suggest the combination of the acrylic acid polymers with hydroxyethyl cellulose and hydroxypropyl methylcellulose. Guley also does not further teach this combination of elements with talc and magnesium stearate. As Guley does not each and every element recited in the noted claims and its ranges, then Guley cannot anticipate the noted claims

The Examiner also rejected claims 4-12 and 30-31 under 35 U.S.C. 103(a) as being unpatentable in view of the teachings of Guley and Jain et al (U.S. Patent No. 4,610,870). The Guley reference is discussed *supra*. Jain teaches controlled release procainamide hydrochloride formulations in which the tablets are comprised of a core of hydrocolloid gelling agents selected from various types of cellulose ethers. Combining the teachings of Jain together with Guley does not provide the presently claimed invention. Furthermore, neither Jain nor Guley suggest providing a composition or device having favourable extended release properties for a pharmaceutical active by the combination of certain amounts of hydroxyethylcellulose, hydroxypropyl methylcellulose and carbopol resin along with talc and magnesium stearate. The Applicants have found that the combination of the elements recited in the claims provide for a controlled, sustained release of the pharmaceutical incorporated therein when administered and ingested within the GI tract.

Based on these submissions, the Applicants respectfully request withdrawal of the rejections of the present claims.

Conclusions

For the reasons given above, Applicants respectfully request reconsideration of this application and timely allowance of the pending claims. Applicants submit that the pending claims are in condition for allowance. If a telephone conversation with Applicant's Attorney would expedite prosecution of the above-identified application, the Examiner is urged to call the undersigned at (617) 832-1000.

Respectfully submitted,

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Copy of the amended claims with changes marked thereon

1. **(Amended)** A controlled release pharmaceutical delivery device which provides sustained or pulsatile delivery of a selected pharmaceutically active substance for a predetermined period of time, said device comprising;

- [about 1 to less than] up to about 50% by weight covalently crosslinked water insoluble, water-swellable polymers comprising polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol;

- about 1 to 75% by weight uncrosslinked, linear water soluble polymers comprising a mixture of hydroxyethyl cellulose and hydroxypropyl methylcellulose;

- up to about 10% by weight talc; and

- up to about 10% by weight magnesium stearate.

4. **(Amended)** The device of claim [3] 1, wherein said [covalently crosslinked water insoluble] polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol are Carbopol resins.

8. **(Amended)** The device of claim 1, wherein said device additionally comprises [;

- up to 35% by weight glidant;

- up to about 35% by weight lubricant; and

-] up to about 95% by weight granulating and tableting aids.

9. **(Amended)** A controlled release pharmaceutical delivery device which provides sustained or pulsatile delivery of a selected pharmaceutically active substance for a predetermined period of time, said device comprising;

- about 1 to less than 50% by weight of a mixture of hydroxyethylcellulose and hydroxypropylmethyl cellulose;

- about 1 to 60% by weight of ethylcellulose;

- about 1 to 80% by weight of at least one Carbopol® resin;

- up to about [less than] 10% by weight of talc;

- up to about [less than] 10% by weight of magnesium stearate; and

- up to about [less than] 95% by weight granulating and tableting aids.

23. **(Amended)** A pharmaceutical composition comprising;

- about 1 to 80% by weight pharmaceutically active agent;

- up to about [1 to less than] 50% by weight covalently crosslinked water insoluble, water-swellable polymers comprising polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol; and

- about 1 to 75% by weight uncrosslinked, linear water soluble polymers comprising a mixture of hydroxyethyl cellulose and hydroxypropyl methylcellulose.

30. **(Amended)** A pharmaceutical composition comprising:

- about 1 to 80% pharmaceutically active agent;

- about 1 to 60% by weight of hydroxyethylcellulose; HEC

- about 1 to 75% by weight of hydroxypropylmethyl cellulose; HPMC

- about 1 to 60% by weight of ethylcellulose; EC

- up to about [1 to less than] 50% by weight of at least one Carbopol® resin;

- about less than 10% by weight of talc;

- about less than 10% by weight of magnesium stearate; and

- about less than 95% by weight granulating and tableting aids.

32. **(Amended)** A controlled release pharmaceutical delivery device which provides sustained or pulsatile delivery of a selected pharmaceutically active substance for a predetermined period of time, said device comprising;

- up to about [1 to 80%] 50% by weight covalently crosslinked water insoluble, water-swellable polymers comprising polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol;

- about 1 to 75% by weight uncrosslinked, linear water soluble polymers comprising a mixture of hydroxyethyl cellulose and hydroxypropyl methylcellulose; and

- about 0.5 to 50% by weight of a coating ~~material comprising~~ anionic polymers based on methacrylic acid and methacrylic acid esters or neutral methacrylic acid esters with trimethylammonioethyl methacrylate chloride or cellulose esters.

33. **(Amended)** A pharmaceutical composition comprising;

- about ~~1 to 80%~~ by weight pharmaceutically active agent;

- up to about [1 to 80%] 50% by weight covalently crosslinked water insoluble, water-swellable ~~polymers~~ comprising polymers of acrylic acid crosslinked with polyalkenyl alcohols or divinyl alchohol;

- about 1 to 75% by weight uncrosslinked, linear water soluble polymers comprising a mixture of hydroxyethyl cellulose and hydroxypropyl methylcellulose; and

- about 0.5 to 50% by weight of ~~a~~ coating material comprising anionic polymers based on methacrylic acid and methacrylic acid esters or neutral methacrylic acid esters with trimethylammonioethyl methacrylate chloride or cellulose esters.